

V.—*Communications on a North-West Passage, and further Survey of the Northern Coast of America.* Received by the Committee of the Royal Geographical Society appointed 8th February, 1836, to examine them. Read, 23d February, 8th and 22d March, 1836.

(From Sir JOHN BARROW, Bart.)

"London, February 15.

"THE Committee having been pleased to ask my opinion regarding a further attempt to effect a North-west passage from the Atlantic to the Pacific, I cannot hesitate to state frankly what my sentiments are, and briefly on what my hopes of success are founded, should such an attempt be made.

"I may observe, in the outset, that the honor and reputation which England has acquired among the continental nations of Europe, for her successful exertions in extending our knowledge of the globe, both by sea and land, has very naturally created in the public mind an ardent desire, now that we are happily in the midst of profound peace, that further endeavours should be made to complete what has been left unfinished. The expression of this feeling, which I believe was never dormant, has now found a central point to make itself heard, by the establishment of the 'Royal Geographical Society,' among whose objects and duties is that of receiving and considering such plans and proposals for enlarging the sphere of geographical knowledge as may be brought under its notice.

"There have probably not been any voyages or land journeys which excited a more lively interest than those for the discovery of a north-west passage, and those expeditions that were sent out for completing the geography of the northern coast of North America. The renewal of these expeditions is the object that recently urged itself on the attention of the Geographical Society. That portion of the land survey which is still required, being detached parts contiguous to others that are known, would not be of difficult or uncertain accomplishment; and there are grounds sufficiently strong for believing that the question of the practicability of a north-west passage, after the experience that has been acquired, will scarcely admit of a doubt. If this be so, as I shall presently endeavour to show that it is, I think the Committee will agree with me that England would be held altogether inexcusable,—that she would justly subject herself to the ridicule of the world,—were she to suffer any other nation, by her own indifference, to rob her of all her previous discoveries, by passing through the door which she had herself opened: for, be it observed, the honor would descend upon him who first stepped over the threshold, and not on him who led the way to it—just as Vasco de Gama has run away with the honour of having discovered and passed the Cape of Good

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Hope, which had been passed and discovered ten years before by Bartholomew Diaz.

"In adverting to this question, it should not be forgotten that for the last 300 years it has never been lost sight of by the government; that it was the favourite object of a queen, of whom England has cause to be proud—the noble-minded and enlightened Elizabeth—that it has met with favour and encouragement from almost every successive sovereign; and that several Parliaments have promulgated rewards, to the extent of 20,000*l.*, for its completion. It has thus, distinctly and unequivocally, become a national object. And when we reflect on the number of brave and enterprising officers it has been the means of bringing forward, the knowledge and intelligence they have acquired and communicated to the world at large in the various branches of science, it is impossible not to wish for the further prosecution of these expeditions. But if, on the contrary, we should allow the completion of them to be snatched away from us by any other power, we shall sustain a humiliating defeat, and give to our rivals a signal victory—the greatest and best of all victories—the conquest of knowledge; not that kind of ephemeral triumph which follows the destructive conquest of man over man, but that which must live, imperishable, through all ages, till Time shall be no more—just as the discovery of a few hundred miles of coast has transmitted to us, and will hand down to the latest posterity, the name of Nearchus, when Alexander's conquests in India, even now but faintly shadowed out, shall be forgotten, or remembered only along with the achievements of his intelligent general.

"The idea of the question of the North-west passage being taken up by some other nation is far from being chimerical. There are two naval powers, either of whom would be ready to take it up were they persuaded that we had abandoned it—it has been the subject of discussion by both; and one of them happens just now to be placed under so many favourable circumstances for attempting it, that I consider it will be matter for surprise if she should not avail herself of them. With improving settlements on the north-west coast of America, close to Behring's Strait—with two corvettes always on the station, and, above all, with a bold, intelligent, and enterprising governor, who passed fifty-eight days on the ice of the Arctic Sea to the northward of Siberia, and whose mind is turned towards geographical discovery—there is every reason to believe that the consent of his government only is wanting to induce him to try his fortune on an adventure, the success of which would confer on his name immortal honor.

"I will now state to the Committee the grounds on which I conceive that the renewal of an attempt to complete the execution of the North-west passage would lead to a successful issue. It has been practically ascertained, by those employed on the Arctic land expeditions, that the current which sets round the Icy Cape, after continuing along the northern coast of America, discharges itself through the Hecla and Fury Strait of Parry into the Atlantic. The only question, then, that remains to be considered is this—Does that

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water communication between the Atlantic and Pacific admit of a navigable passage for ships? And, if so, how happens it that so little progress has been made towards its completion?

"I shall in the first place endeavour to explain the failure. Of the first voyage little need be said—it confirmed the existence of a large opening to the westward, seen and recorded by Baffin, and let the second in command see that there was no visible obstruction, but the most encouraging circumstances for proceeding farther to the westward. Having satisfied the Board of Admiralty of such being the fact, he was accordingly appointed to the command of a second expedition, and proceeded without the least interruption as far as Melville Island, where he wintered; but here the ice that set in was so thick and compact—such masses were thrown on the coast, that he nearly lost one of his vessels; and found it impossible the following season to make farther progress to the westward. In a third voyage the attempt was made down Prince Regent's Inlet, where, by keeping close in with the shore, the ships were beset by the heavy ice, and one of them destroyed.

"It is clear that all these attempts were experimental—the route to be pursued was untried and consequently unknown—the preparation for passing the winter in the icy sea was equally new. Thus circumstanced, it was natural enough to cling to some shore—the very worst plan, as experience has proved, that could have been adopted. We need only look at what happened to Ross in Regent's Inlet; by clinging to the coast, he moved about 300 yards in a whole season, and in the next abandoned his ship. Parry also discovered, when it was too late, that while he was shut up by ice for nine months out of the twelve, there was abundance of open water and floating masses of ice at a distance from the shore, in which he might have moved along in one direction or another.

"Now we know, and I can speak from some little experience, having once been shut up three days in interminable ice, that very little danger need be apprehended for a ship so situated. Indeed, it is but the other day that one of the whaling ships, the *Granville Bay*, was inclosed in the ice, with which she drifted 600 miles, whilst four others, supposed to be fast by the shore, have very little prospect of being relieved before the month of June or July next. There cannot, therefore, be any fear of a man-of-war, by being shut up in the ice—doubled and strengthened as she would be for the occasion—suffering much damage. Besides, the shores of the Arctic Seas afford little or no assistance to the navigators—while they are fatal to any expedition, by the detention they occasion, till it becomes too late to make progress. The plan then should be, to keep in the open sea, whether covered with ice or not—covered, I believe, it never is—the ice may move about in *fields* or separate masses, according to the direction and strength of the wind, but there will always be open water.

"But then comes the main question, 'Where is this open sea to be found?' In my view of the case, it has been already found, and I will briefly point it out.

"We know, from the observations of Franklin and Richardson, that from the several points they visited along the northern coast of America no land was visible to the northward, and that they found the sea mostly free from ice, except in two or three places, where there were small detached masses, offering no obstruction to the navigation even of the Eskimaux canoes. We further know that, in the year 1822, two Russian corvettes passed thirty or forty miles beyond Icy Cape, found an open sea with no ice to obstruct navigation, and a current setting to the eastward. Since then Captain Beechey's master doubled Icy Cape in the ship's longboat, and proceeded seven degrees of longitude to the eastward without any obstruction; no land was seen by him to the northward. There is another important point to be mentioned. Captain James Ross, in his progress on the western coast of the land which has been called Boothia, saw no land whatever to the westward; and his idea is, that the same coast trended up northerly to Cape Walker in Barrow's Strait, where Parry describes a large opening.

"We may therefore, I think, safely infer that between the coast of America and the northern islands (that of Melville and others) there is a broad open sea—open enough for a ship of war to make her way through it. The result of four voyages has shown that no difficulty exists in the navigation of Lancaster Sound and Barrow's Strait; that out of the latter are several large openings on the southern side, through one of which, perhaps the nearest or that about Cape Walker, a ship would easily pass into that part of the Arctic Sea which I have pointed out; and in such case, I do not think it would be presuming too much to express a hope, that the passage would be accomplished—and perhaps in one year.

"The Committee will be aware that expeditions of the magnitude of those now under discussion can only be attempted under the sanction of government and at the public expense.

"JOHN BARROW."

(From Dr. RICHARDSON, R. N., addressed to Captain BEAUFORT, R. N.)

"DEAR SIR,—The very remarkable drift of the whalers that have recently escaped from the ice of Davis's Straits, (showing in a most unequivocal manner the strength of the steady current which flows out of Baffin's Bay,) having, in conjunction with other circumstances, invested the question of a *North-west Passage* with a new interest, and excited the attention not only of the scientific circles, but of the public in general, it seems desirable that the officers who have been employed on the northern expeditions of discovery should record their opinions, and I therefore commit to paper the substance of the conversation that I had with you two days ago on the subject.

"The search after a North-west Passage, though often relinquished when the want of success has depressed the public hope, has been as often resumed, after a greater or smaller interval, with fresh

ardour; and as every one who carefully and dispassionately examines the records of past voyages, and duly considers the current which successive navigators have observed to set into Behring's Straits, along the Arctic coast, and out of the Fury and Hecla Strait, must be convinced that a water communication between the two oceans does exist to the north of America, so it is no presumption to affirm that the search will not be finally relinquished until it is crowned with success. The lead which England has taken in this enterprize has furnished her with one of the brightest gems in her naval crown; and to those who meet every generous undertaking with the question of "*Cui bono?*" it may be replied that the Hudson's Bay fur-trade, the Newfoundland cod-fishery, the Davis's Straits whale-fishery, admirable nurseries for seamen, and the discovery of the continent of North America itself, pregnant with consequences beyond human calculation, are the direct results of expeditions that sailed in quest of a North-west Passage. But it is not on the existence of this passage that my argument for new expeditions of discovery rests; for were it even proved that, contrary to the opinions of the ablest officers who have sailed the Polar Seas, no practicable channel for ships can be found, still I hold it to be the duty of those who direct the councils of the British empire to provide for the exploring of every part of His Majesty's dominions. This would, in the first place, be merely an act of justice to the various tribes that have acquired a claim on England for protection. The deadly feuds between the Esquimaux and the neighbouring Indians* can be terminated only by the extinction of one of the parties or by European interference; and should our repeated visits to those remote coasts be the means of carrying thither the blessings of peace and of shedding the light of Christianity on the benighted inhabitants, it would in my opinion be an ample recompense for all the exertion that England has made and all the expense she has incurred.

"Even on the score of expense, however, it may be easily shown that an exact determination of the geographical position of places often proves of unforeseen importance. How many thousands of pounds, and what an extent of territory, would have been saved to England, and what costly commissions and lengthened conferences avoided, if, previously to the treaty of 1783, an astronomer had been sent out to ascertain the true position of the sources of the St. John, the Lake of the Woods, and other points of the disputed boundary line between the United States and British America! At the period alluded to, the Lake of the Woods was supposed to be nearly due west of Lake Superior, and to be so remote from civilization, that centuries might be expected to elapse before the right to the territory that its assumed position involved could become a matter of discussion. But far to the north as that lake has been ascertained to be, there is now a prosperous British settlement, containing upwards of

* A battle between the Loucheux Indians and the Esquimaux, attended by considerable loss of life, took place two years ago.

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nine thousand souls, still farther to the north. The government of the United States, fully aware of the practical advantages to be gained by obtaining a correct knowledge of their extensive territory, have year after year sent out exploring expeditions, for the double purpose of topographical delineation and of impressing the Indian population more strongly with an opinion of their power and good intentions than could be derived from the conduct of small bodies of men wandering through the country, and engaged solely in commercial pursuits. The Russians too have recently, by a series of expeditions, re-surveyed Nova Zembla, the shores of the White Sea, with great part of their northern Asiatic coasts; and they carefully preserve and extend their influence in the north-west parts of America by the presence there of one of their most distinguished naval officers*, having constantly one or more ships of war under his command. It is not too much to expect that England will not long lag behind her rivals in matters which so nearly concern her interests, since she has already gone far beyond them and all other nations in the equipment of expeditions having for their end the extension of geographical knowledge at large, and the general advancement of science. I may also briefly allude to the immediate benefits which navigation as an art has received from expeditions of discovery. The voyage of Columbus, which gave a new world to Europe, made us acquainted with the variation of the magnetic needle; that of Captain Flinders shewed the deviation of the compass from local attraction on ship-board; and the late Arctic expeditions may be considered as the cause of the successful issue of the investigation of the subject, resulting in the beautiful theory of Professor Barlow and his admirable practical contrivance. The problem of the tides, so important to seamen, on which Mr. Whewell and other eminent mathematicians are now labouring, may also receive illustration from an examination of the Polar Sea; and when meteorology, of so much consequence both to seamen and landmen, but at present in its infancy, shall have made the progress that it may be expected to do, considering what has been done in other branches of science, the observations recorded by former voyagers in high latitudes, and those that shall hereafter be made, may be of great use. Lastly, as Captain Cook shewed the method of expelling the scurvy from the British navy, so Sir Edward Parry was the first that practically proved the safety with which seamen can winter in the coldest climate. It is therefore under a Naval King especially that such enterprises should be undertaken, and I hope that to the present reign will belong the glory of completing the one so far advanced, which can be most easily done while officers trained up to such services are still in the vigour of life.

"The countries traversed by the expeditions of Sir John Franklin and Capt. Back are rich in minerals: inexhaustible coal-fields skirt the Rocky Mountains through twelve degrees of latitude; beds of coal crop to the surface on various parts of the Arctic coast; veins of lead ore

* Baron Wrangel.

traverse the rocks of Coronation Gulf; whales abound off Cape Bathurst; and, in short, even a cursory perusal of Sir John Franklin's narrative will convince the reader that, in the above brief enumeration, I have not exaggerated the natural advantages of the country whose boundaries are to be explored. To render these advantages available to England, it is not necessary that a ship should be able to perform the North-West Passage in one year. The discovery of a strait in the unknown space to the southward of the alleged peninsula of Boothia (including only about 22 miles between the seas crossed by Captains James Ross and Back), or one leading from Cape Walker down to Coronation Gulf, would be all that is requisite. The true channel once ascertained, the obstruction caused by the casual packing of ice, in one or two narrow passages, would be easily obviated by a proper adaptation of the powers of steam to that kind of navigation; and a steam-vessel, having gained the open sea known to exist to the eastward of the 107th meridian, would find access to the heart of the country by the Mackenzie River, which flows through a well-wooded tract skirted by metalliferous ranges of mountains, and offers no obstruction to steam navigation for upwards of 1200 miles. Having advanced these very general arguments for the completion of the survey of North America,—and I am fully conscious that I have by no means done justice to the cause,—I proceed to the main subject of this letter, namely, a detail of a plan for the execution of the project.

“A reference to the Admiralty circumpolar chart will show at once what has been effected by preceding expeditions, and what remains to be done. The breadth of the American continent, between the entrance to Hudson Straits and Cape Prince of Wales, comprises in round numbers one hundred and three degrees of longitude, of which ten remain unknown between Captain James Ross's farthest point and Sir John Franklin's Cape Turnagain; there are about six more between the latter officer's most westerly point and Captain Beechey's greatest advance from Behring's Straits; and the unexplored space between the Strait of James Ross and Back's Sea, being 22 miles, is rather more than one degree of longitude in that parallel. The extent of coast remaining unexplored is therefore small when compared with that which has been already delineated. In one season, Sir Edward Parry sailed through 31 degrees of longitude due west from the entrance of Lancaster Sound; and on Sir John Franklin's second expedition, the coast was laid down for 36 degrees on a more southerly parallel, in less than six weeks of boat navigation.

“To complete the survey of the Gulf of Boothia, and establish its connection or separation, as the case may be, with the Strait of James Ross, no better plan can be proposed than the one suggested by Sir John Franklin, of sending a vessel to Wager River, and carrying on the survey from thence in boats; but I leave it to that distinguished officer to give the details of his own project. The one I am about to propose embraces a different part of the coast, and has very greatly the advantage, in point of economy, of any expedition requiring the fitting out of a ship or ships.

"I would propose, then, to complete, in the first place, the survey of the coast to the westward of the Mackenzie; and, secondly, that to the eastward of Point Turnagain;—both which services could be effectually performed by an expedition having its winter-quarters at the north-eastern end of Great Bear Lake. The party ought to consist of not more than two officers and sixteen marines, or sappers and miners, accustomed to the oar, and who have been brought up as joiners, sawyers, boat-builders, wheelwrights, or blacksmiths. I know that men having these qualifications belong to the corps I have mentioned, and would at once volunteer for such a service. It would be necessary also to engage, for the inland navigation, bowmen and steersmen acquainted with the northern rivers, and two Canadian or Orkney fishermen. Previous notice having been dispatched from England, in March, to the Fur Countries, to provide a certain supply of pemmican and other necessaries on the route, and to make arrangements with Indian hunters, the expedition should sail in the annual Hudson's Bay ship, which leaves the Thames in the beginning of June, being provided with two boats constructed of white cedar for lightness, and drawing as little water as is consistent with the requisite capacity for carrying a cargo. It would reach York Factory in August, and, if early in that month, would experience no great difficulty in arriving at the Athabascow, or, under almost any circumstances, at Isle à la Crosse, before the rivers are closed. The latter post would be convenient for the employment of the men during the winter, in conveying pemmican across from the prairies; and from that place, and still more easily from Athabascow, the two boats, containing the officers and fourteen men, loaded merely with the necessary provisions and arms for the voyage, could proceed down the Mackenzie River to the sea, so as to reach it quite as early as it would be desirable to do, and time enough to complete the survey to the westward*.

"In the mean while, the fishermen and the remainder of the party should bring up the stores in one of the Company's barges to Great Bear Lake, where they would erect the winter residence and store up fish, rein-deer, and musk-ox meat, until the return of the exploring party, which would be before the end of September; there would still be a sufficient space of time for the boats being sent up Dease's river, and down a small stream which falls into the Coppermine, laden with pemmican for the next year's voyage, properly secured from wet in tin cases. These should be laid up in a convenient place out of the reach of the spring floods, and the remainder of the stores ought to be transported to the same place early in the spring on the snow. As the distance is small when compared with the portages made on the other expeditions, the whole equipment might indeed be left at the wintering post until the general movement of the party in the spring; but it is better that the men should be spared from fatigue as much as possible in the outset of the voyage. The expedition should be on

* It would be possible to save the officers one winter in the country by taking the route through Canada, but this would greatly increase the expense, and also require the transport of the boats and stores to the Athabascow in the previous season.

the banks of the Coppermine in June, so as to descend that river when it is swelled by the floods of melting snow; the rapids could be passed safely at that time, and the sea be reached in a single day. The distance between the Coppermine River and Captain James Ross's farthest point is not so great by one quarter as that between the Mackenzie and Coppermine, which tract was surveyed in one month. A shorter period may therefore be fairly allotted to the delineation of the former, the more especially as nearly one-half of it has been already laid down by Sir John Franklin, so that a straight course can be steered from cape to cape; and if the south end of Boothia shall not have been determined by another expedition, it may form, without hazard, one of the objects of this one; or any time that may remain between the completion of the survey and the end of August may be devoted to the examination of the eastern side of Wollaston Land, so as to ascertain whether or not there be an open sea between it and Barrow's Straits.

"In the foregoing sketch, the peculiar fitness of the east end of Great Bear Lake for a wintering place, as being a central position between the unexplored parts to the east and west, has been made apparent. Its nearness to the sea-coast is very greatly in its favour, not only as rendering it easily attainable should any accident happen to the boats, but also as allowing the expedition to remain longer at sea. It is also no small recommendation, that the route from the sea, having been twice travelled over, is well known, so that all the obstacles it offers can be provided against. It is also better adapted than any other situation in the country north of Great Slave Lake for the support of a large party; and, indeed, on Sir John Franklin's first journey, Mr. Dease mentioned it as being in his opinion the best spot that could be chosen for a wintering post, though circumstances that could not be controlled prevented his suggestion from being acted upon. Dease River flows through the best hunting-grounds of the Dog-rib and Copper Indians: it was from that vicinity we obtained our supplies of dried meat at Fort Franklin in 1825-26; and Great Bear Lake yields fish enough for the support of a much larger party than it is proposed to employ. In mentioning the principal points to be attended to, I have not said that it is necessary to obtain the concurrence and cordial co-operation of the Hudson's Bay Company, since that enlightened body has never failed to lend its powerful and indispensable assistance to an expedition patronized by government, and having science for its aim.

"No time can be more auspicious than the present for this undertaking; and I trust that the learned Secretary of the Admiralty will exert his influence in procuring the adoption either of this plan, or of a more efficient one, and thus provide for the completion of an enterprise, which, under his fostering care, has made greater progress in a few years than it had done for previous centuries.

"I have the honour to be, dear Sir, yours, &c.

"*Melville Hospital, Chatham,*
"February 6, 1836."

"JOHN RICHARDSON."

(From Captain Sir JOHN FRANKLIN, R.N., addressed to
Captain BEAUFORT, R.N.)

"21, Bedford Place, Feb. 10, 1836.

"DEAR SIR,—The arguments set forth in Dr. Richardson's letter for the completion of the survey of the Northern Coast of America are so forcibly put, that I was quite prepared for their being most favourably received by the Geographical Society. The plans which he suggests for the completion of the survey of that portion of the coast west of the Mackenzie, and of the parts east of Point Turnagain, are full of research and interest, and deserve all the consideration and encouragement which I truly rejoice to perceive they are likely to meet with from the Society. The Doctor alludes in his letter to some propositions which he knew I had made in the year 1828, at the command of his present Majesty, then Lord High Admiral, on the same subject, and particularly to the suggestion as to proceeding from Repulse or Wager Bay. On this point, I remember to have had several conversations with you at the time, and since; I trust, therefore, you will now give me leave to offer my opinions to you somewhat more in detail. A recent careful reading of all the narratives connected with the surveys of the Wager and Repulse Bays, and of Sir E. Parry's voyage—together with the information obtained from the Esquimaux by Sir E. Parry, Sir J. Ross, and Captain Back—confirm me in the opinion that a successful delineation of the coast east of Point Turnagain, to the Strait of the Fury and Hecla, would be best attained by an expedition proceeding from Wager Bay, the northern parts of which cannot, I think, be farther distant than forty miles from the sea, if the information received by the above-mentioned officers can at all be depended upon; and that the information received from the Esquimaux was particularly correct in three instances, Parry, in his second voyage, pointedly remarks.

"The plan, therefore, that I recommend, is to send two vessels to Wager Bay, provided with two boats, each constructed as lightly as possible, for the purpose of being transported over the land, yet of a capacity sufficient to carry eight persons, with two months' provisions and a few presents for the natives. The provisions for the coast voyage should be entirely pemmican, and flour or other farinaceous substance. Two of the largest Dock-yard lighters would, I think, answer the purpose, if ships were thought to be too expensive; and would, I conceive, conveniently accommodate from twenty-five to thirty persons each, with the necessary stores, provision, and boats. These vessels should sail with the Hudson's Bay Company's ships at the latter end of May; which ships would, I am sure, readily be allowed to carry a part of these provisions, in case receiving the whole on board in the Thames should bring the lighters too deep for making an expeditious passage across the Atlantic. They should separate from the Hudson's Bay ships after passing through the narrowest part of Hudson's Straits off the Mill or Salisbury Islands, and, keeping outside of Southampton Island, make the best of their way through the

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FRANKLIN."

Frozen Strait to Wager Bay. If the season were favourable, they might perhaps reach their anchorage in Wager Bay by the middle of August, and every preparation having been previously made, the crews should immediately be employed in transporting the boats' provisions and requisites for the coast voyage across the portage. The narrowest part of the isthmus appears to be from Savage Sound, though it will probably be found not much broader from Douglas Harbour, where the vessels would be more secure. The relative breadth, however, would be ascertained by a light party in two or three days, and in the most eligible place, thus ascertained, the portage should be made. If the boats and stores could be got across the isthmus by the last week in August, the parties appointed to survey the coasts should embark at once, as the experience of all the voyages has shown that the most open water may be expected for three weeks after that time; and this time will enable the parties to accomplish the greater part, if not the whole, of their respective objects. I would propose sending two parties from the point on which the embarkation can be effected; the one to trace the coast westward towards the part Captain Back reached, and onwards to Point Turnagain if practicable; and the other to follow the east shore of Prince Regent Inlet up to the Strait of Hecla and Fury, and farther if necessary, to settle the geographical question as to the north-east termination of the land. It would be most prudent to send two boats on each of these services, with a crew of two officers and six seamen: though as nothing is to be feared from the hostility of the Esquimaux in that quarter, one boat, I think, might safely proceed. A boat of 22 feet in length and 4 feet 10 inches in breadth would be of a good size, and if built of thin mahogany could be easily lifted clear of ice by the crew; and for their transport across the portage more men might be employed. The provision, I have said, should consist of pemmican and flour; the latter should be inclosed in several wrappers of water-proof cloth or flannel. The pemmican could easily be made in England, and at no very great expense; it should be packed in tin cases containing fifty pounds each, and hermetically sealed. It could, when thus secured, be left on the sea-coast side of the portage, covered over with stones, without the fear of its being destroyed by the wolves or other animals, in case it should be found that the party reached the sea-coast too late for embarkation the same season. I should recommend, indeed, in such case, that the boats and stores having been carried over be all left on the north side.

"There is little doubt in my mind of the western party reaching the mouth of Back's River without more than the ordinary interruptions of such a coasting voyage; but here a doubt presents itself occasionally to my mind, grounded on the Esquimaux authority, which it is fair to state: viz. whether the supposed strait between the farthest land seen by Capt. Back and that reached by Capt. James Ross does exist. If it fortunately do, then the tracing of the coast as far as Point Turnagain could be continued by the same course of proceeding; if it do not, then a portage would have to be made to effect that object, the extent of which is not at present known,

and which might require more time to accomplish than one season would allow. This doubt causes me to look with particular pleasure on the suggestion of Dr. Richardson as to completing the survey eastward of Point Turnagain from the Coppermine River. If the land be continuous from the most northern point seen by Captain Back to that visited by Capt. James Ross, and no strait should intervene, then unquestionably the boats would be best placed on the western side of that land for the survey of its coast, which might perhaps be continued up to Cape Walker, and thereby gain well-grounded information for the guidance of the ships which I trust will be sent in search of the N.W. passage. Should the strait in question be found to exist, then the expedition proceeding eastward from the Coppermine River, and that tracing the coast westward from Regent's Inlet, would in all probability meet, if they should set forward on their respective enterprises the same season, which might be done. The party from the Coppermine River would at any rate proceed with more confidence, having the assurance of finding vessels in Wager Bay ready to receive them, and being spared the risk of returning very late in the season to their winter quarters.

"I have not dwelt on the strengthening or fitting of the vessels, nor on the situation in which I should place them for the winter, though these are points which you will imagine have engaged my deepest consideration; but it does not seem necessary now to state these in detail. I may briefly say that the vessels must be secured to withstand the contact of ice, and stored with provision for two years, if they will carry so much: if not, a supply should be sent for them by the Hudson's Bay ships to Churchill Fort, which in the summer months could be fetched by one of the vessels. If the vessels were dock-yard lighters and could berth twenty-five seamen each besides officers, which I think they could do, I conceive, when safely moored in some snug place, they might be left with eight men and two officers in each while the boats were absent, a number which could be so left even if two boats were required on each service.

"I had at first hoped that under peculiarly favourable circumstances the vessels might have reached Wager Bay by the close of July, in which case I should have expected the surveys might be accomplished in time for the vessel to get through Hudson's Strait the same season and return to England; but on reference to the preceding voyages to this quarter, I fear this expectation would be somewhat too sanguine. Parry arrived in Repulse Bay on 21st August; Lyons off Wager Inlet 13th Sept.; Ellis, after wintering in Hayes River, 29th July; Middleton in Repulse Bay 12th July, after wintering in the south. And in our first voyage we were only off Cape Digges, Hudson's Strait, on the 19th of August.

"In the observations which I offered at the meeting of the Geographical Society on Monday last, at the request of the President, I concluded by stating that Capt. James Ross and Capt. Back might be considered to have an acknowledged claim for employment on these services, the former if an expedition by ships to discover the N.W.

Passage be sent, and the latter in the command of any party sent to complete the survey of the coast east of the point of his last expedition. This opinion I still hold; but I hope that I shall not be considered as wishing in the least to interfere with the claims of these zealous and active officers if I add, that in case of either of them not being at hand when the expedition ought to sail, I should feel the greatest pleasure in filling his place. You know, I am sure, that no service is nearer to my heart than the completion of the survey of the North coast of America, and the accomplishment of a N.W. Passage.

"Very faithfully yours,

"To Capt. Beaufort, R. N."

"JOHN FRANKLIN."

(From Captain BEAUFORT, R. N.)

"EVERY year seems to bring forward some accession of interest to the great questions of the North-west passage and of the northern configuration of America; and the Resolution of our Society at the meeting of the 8th inst., that Government should be petitioned to dispatch a fresh expedition to that quarter, having led to the appointment of this Committee, I have ventured to state my sentiments on the three plans which have been suggested.

"One of these plans boldly urges the direct accomplishment of the North-west passage by sea; the other two confine themselves to the completion of the coast, either by an inland line of communication, or by the transport of boats from Hudson's Bay; and all three are from such high authorities, so strongly recommended, and so ably argued, that I hope, whatever may be the result, the Council will print them in our Journal.

"That there is an open, and, at times, a navigable sea passage between the Straits of Davis and Behring there can be no doubt in the mind of any person who has duly weighed the evidence; and it is equally certain, that it would be an intolerable disgrace to this country were the flag of any other nation to be borne through it before our own.

"Whenever the wisdom of Government shall think fit to solve this great problem, I am satisfied that the mode proposed by Sir John Barrow is the most prudent that could be adopted. By trying one of the eastern openings which he mentions, the vessels would proceed from home fresh and unexhausted; and if met by insuperable obstacles, or arrested by unusual severity of weather, they would be carried back by the prevalent current to the eastward, or they would winter there with security. Whereas, if, already harassed by a long voyage round Cape Horn, they were to plunge from the westward into those unknown regions, and if from any cause they were unable to penetrate them, they could neither return against the joint pressure of ice and current, nor communicate their situation to any settlement, nor ever hope for assistance. To seize the proper moment for effecting this ambitious object is solely the duty of Government—and the

resulting credit, both at home and throughout the world, will be solely theirs.

"In the meantime, it appears to be no less the duty of the Geographical Society to recommend a humble and more temporary field of action—more appropriate to the nature of our Institution, more easy and economical in its execution, and more certain and rapid in its result.

"Under this impression I would entreat the Council to take every means they possess of persuading Government to fit out a small expedition this summer for Wager Bay, according to the general plan set forth by Sir John Franklin; and I beg leave here to observe, that completing the coast line would necessarily throw much valuable light on the direction and facilities of the passage, while even the accomplishment of the passage (as supposed to exist) could scarcely contribute any thing to the determination of the coast line. Further, an expedition, aiming at the passage and failing, would do almost nothing for geographical science; whereas an expedition along the coast, however incomplete, must add something to our existing stock of positive knowledge.

"If this proposition should be adopted by government, I shall find other opportunities of entering into the details and arrangements; but as the principal feature of the plan, I would now suggest that the expedition should consist of two small vessels, that they should sail in May for Wager Strait, where a full reconnoissance of the isthmus being made, and the opposite gulf being probably gained, one vessel should be comfortably secured for the winter, and the other should return home to impart the progress and prospects of her consort.

"The object of the above process is, that by gradually uniting the known parts of the coast we should vanquish all difficulties by quiet and moderate efforts, attended by little expense and less risk—and like a skilful general, basing our operations on points already in possession, we should secure every step of our advance, as well as preserve every facility for our retreat.

"F. BEAUFORT."

"Admiralty,
"February 20, 1836."

(From Captain Sir JOHN ROSS, R.N., addressed to Captain
MACONOCHE, R.N.)

"London, 5th March, 1836.

"SIR—At a meeting of the Royal Geographical Society, held on Monday the 22d ultimo, I was gratified to find that the question of the North-West Passage was again to be seriously taken into consideration, and it was with pleasure that I listened to the papers which were read on that interesting subject. Actuated by the same motives which induced me to employ my time and sacrifice my private fortune, namely, that my country should gain the glory of deciding a

question to which so much importance has been attached, I cannot but be desirous to afford my mite towards its completion; and my anxiety that such an expedition should depart from the shores of Great Britain in a state the most likely to obtain the great but difficult object, has induced me now to take up the pen.

"With regard to Sir John Franklin's plan for finishing the late survey made by Captain Back, I have only to express my unqualified approval, and offer my strenuous support; and it is almost superfluous to add, that Captain Back, whose abilities, intelligence, zeal, and perseverance, have been so manifest on every occasion, ought to be the officer selected to command, and to whom a *carte blanche* should be given. Observing, however, that much stress has been laid on the easterly current, it may be proper to remark, that this current can be fully accounted for, in the summer by the melting of snow, which produces rivers equal in size to the Thames, and in the winter by the continual north winds, which keep the ice in constant motion in Prince Regent's Inlet, and which we often observed to raise the sea near our hut many feet. This would produce the effect mentioned, and the easterly current in Hecla and Fury Strait is, therefore, no proof of a passage at the bottom of the Gulf of Boothia.

"With respect to the expedition which has been recommended to pursue the route of Sir Edward Parry, although decidedly in favour of the expediency of such an expedition, I confess that I cannot subscribe to the manner or the plans proposed for carrying it into effect, it being understood that two bomb-ships, such as were commanded by Sir Edward Parry, are to be employed. And having been, though accidentally, present when the plans were read at the last public meeting, I feel myself called upon to state my reasons for opposing that part of the proposition, lest my silence should be construed into approbation, and more especially, because I am fully convinced that it would prove fatal to every one employed.

"It is on the probability that a passage exists about due south of Melville Island, that is, between it and Cape Walker, that this expedition has been proposed; and although all the indications which were originally held out, as imperative and inseparable from its existence, have been over and over again disproved by every expedition, I am not now disposed to dispute the question, especially as a proof of its non-existence would be almost equally important, since it never can be of use to commerce, nor could the discovery of a passage in that direction in the least affect those made by the Victory. I admit, therefore, that it is still a national question.

"The first inquiry that presents itself is—Why did not Sir Edward Parry, whose zeal, ability, and perseverance, cannot be surpassed, attempt, with his ships of the same description, the method now proposed—namely, to push among the ice into the vortex of the supposed passage, trusting the rest to Providence? The answer is briefly this: no man in his senses would commit such an act of imprudence, with bomb-ships, such as now proposed, drawing eighteen feet, and with a complement of sixty men. No one can declare with more jus-

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tice than myself,—‘ That if we make the best use of what Providence has put within our power, we may safely trust in Providence ;’ but we are not therefore justified in tempting Providence by running wilfully into such a situation. I shall point out why such an act would be imprudent. The ice which Sir Edward Parry met at the west end of Melville Island did not drift to the southward with a northerly wind, but stopped, and when the pressure increased, took an easterly direction, an undeniable proof that it must have met with some obstruction in going south, otherwise it would have drifted towards the coast of America, no less than 250 miles distant, by the impulse of the wind, for there was no current; it must, therefore, have met with either land, shoal water, or islands, probably the two latter, over or among which the ships must necessarily pass, to reach the said coast. I, therefore, maintain it to be absolutely necessary that ships destined to try this experiment, and drift through by the impulse of the winds acting on the ice which besets them, should draw *less* water than the surrounding ice, which has been ascertained to be not more than nine feet thick. Yet, notwithstanding the example of the *Fury*, and the many instances we had on board the *Victory*, in which we owed our preservation entirely to her light draft of water (only seven and a half feet), ships drawing eighteen feet are now proposed! Again, in the event of wreck, twenty men might find subsistence where sixty could not. It has been said that the weight of a large ship is of advantage in forcing the ice; but that, which only holds good in a gale with plenty of room, cannot be put into comparison with the advantages in warping which a small vessel has over a large one: a single man will move a vessel of 50 tons faster than sixty could a vessel of 300; and a small vessel is much more able to sustain pressure than a large one fortified in the same proportion, while the expenses of every description are less. Moreover, in the event of damage sustained in the bottom, a large ship, or one drawing more than eight feet (which is the rise and fall of the tide), must be discharged and hove down, while a small vessel, or one drawing less than eight feet, may be laid on the ground with safety, and repaired in a tide. With respect to provisions, I have by my last voyage proved that a small ship will carry much more, in proportion to her crew, than a large one. In short, if ships such as the *Terror* and *Erebus* are sent on this service, with the intention of ‘ trying their luck,’ either by keeping the south shore of Barrow’s Strait, or by taking the ice, the probability is, that they and their crews will never be heard of.

“ It now remains to be described what would be the most advisable and efficacious plan for such an enterprise.

“ I say at once—let proper ships be constructed by government, ships that would only draw from seven to eight feet water when loaded, whose capacity to carry stores and provisions is extended by an increase of length and breadth, and whose form, between a foot *above* the loaded mark and the bilge, is conical, so that they would rise to a pressure. Let one such be fitted with water-tight bulk-heads,

with every kind of solidity given to her timbers, and to this let a small steam-boat be added, with the most approved engine, boats, and provisions for two depôts, and then there will be some chance of success. The vessels, all drawing less water than the ice, will be secure from rocks and shoals; and if damaged, they will be speedily and easily repaired. Finally, in the event of total wreck, the crews being less numerous, may be saved in the same manner as myself and my devoted companions.

"With respect to the mode of navigation, that practised by Sir Edward Parry and myself having been alluded to, I must, in the first place, state, that the comparison between the ice in Baffin's Bay, and that in Prince Regent's Inlet and Barrow's Strait, is fallacious: the ice in which the whalers were lately beset in the former having been large fields of plain ice, steadily drifting down Davis' Straits, without meeting with any obstruction, into an open sea; while the latter, consisting of huge amorphous pieces, were meeting resistance in every direction, and there being no outlet, the pressure in a gale became tremendous. The *Fury* was, indeed, wrecked near the shore, because she drew much more water than the besetting ice; but it is not the fact that the *Victory* met with any damage; and when we left her she was in as perfect a state as when she sailed from England. Both Sir Edward Parry and myself have been of opinion that the best chance of making progress is between the shore and the ice; I am still of the same opinion; and I think, that if the question is ever decided, it must be by keeping close to the shore, from Cape Walker, westward.

"In concluding, I must observe, that unless the winter preceding the season in which the expedition sails is found to have been mild in North America, Russia, and Lapland, there is no chance of success. It was in consequence of the reports which I obtained from thence, at considerable expense, that I determined to persevere after the mutiny of the *John*, and other untoward circumstances. In short, let the ships be ready to take advantage of a favourable season. I regret that my remarks, which I now request you to lay before the Society, do not accord with the opinions of some of its most influential members; but trusting that justice will be done to my motives, I have to assure you, that no one can be more desirous for the promotion of an object so worthy of the nation, and no one would be more rejoiced than myself to hear of the complete success of the enterprise.

"I am, Sir,

"Your most obedient Servant,

"JOHN ROSS,

"*Captain Maconochie, R.N.*
 &c. &c."

"Captain of the Royal Navy.

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